Semi-Annual Report on Nonpoint Source Pollution Elimination Activities in Slabcamp Run and Kanes Creek subwatersheds of Decker's Creek

October 1, 2011 – March 31, 2012

Friends of Deckers Creek
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Watershed information		
Stream code	**WVM-8**	
HUC8	**0502003**	**Monongahela River**
HUC10	**0502000302**	**Deckers Creek**
HUC12	**050200030202**	**Outlet Deckers Creek**

Subwatersheds			Aluminum[1]			Iron		
Stream	code	SWS	TMLD[2]	Current[3]	Target[2]	TMLD	Current	Target
Slabcamp Run	WVM-08F	23	41,877	14,600	41,877	199,553	7,300	7,053
Kanes Creek	WVM-09I	206	11,791	19,200	2,437	52,987	19,100	7,516

[1] Water quality standards were changed to dissolved aluminum after this value for total aluminum was calculated. Current loads are loads of dissolved aluminum.
[2] Total and target loads determined in the TMDL analysis
[3] Load measured between 7/1/2006 and 6/30/2011

OVERVIEW

Friends of Deckers Creek (FODC) is currently carrying out projects funded by three incremental grants. One is supporting a project on Kanes Creek, and two are supporting projects on Slabcamp Run. This report first reviews progress on these incremental grant projects.

FODC is also carrying out projects funded by three "Additional Grant Opportunities" (AGOs), which are dedicated to other phases of the process of eliminating nonpoint source pollution.

The TMDL that is guiding remediation for the Monongahela River watershed, including the Deckers Creek watershed, enumerates load reduction targets for total aluminum, total iron, and total manganese. Since that time, the in-stream water quality standard has been changed and is now based on dissolved aluminum. In addition, the requirement that total manganese concentrations meet standards has been removed from streams more than five miles above public or private water supply intakes. Therefore, the only valid TMDL target for tracking is total iron.

Acid Mine Drainage (AMD) consists of many forms of acidity, including both metals, especially in the dissolved form, and hydrogen ions. The simplest treatment scheme is neutralization of both metals and hydrogen ions. Therefore, FODC strives to track aluminum, iron, manganese, and total acidity. The metals contain acidity, and acidity must be removed to cause them to precipitate out, but some acidity can remain even after they are removed.

The "FODC GRTS information Spring 2012.xlsx" spreadsheet, which accompanies this report, not only copies the relevant TMDL base loads, it also includes loads that FODC has measured for the various subwatersheds.

INCREMENTAL GRANTS

Kanes Creek South Site #3 and Morgan Mine Road AMD Remediation

Name:	Kanes Creek South Site #3 and Morgan Mine Road AMD Remediation
Agreement Number:	1287
Fiscal year:	2008
Amount:	$ 150,000
Spent as of 3/31/2011:	$ 1,798
Reimbursed as of 3/31/2011:	$ 0

Narrative

The original project proposed remediation of AMD from the "Morgan Mine Road AMD" discharge, and from six discharge areas on Site #3 of the WVDEP Office of Abandoned Mine Lands Kanes Creek South project. FODC learned that the Morgan Mine Road AMD project had insurmountable obstacles.

Difficulty in communication between FODC and the landowner of part of Kanes Creek South Site #3 (KCS3) also slowed the project. It was not until an attempt to procure an engineering company for project design that we learned the landowner required compensation for use of his land. FODC therefore asked WVDEP to recall half the funds, and FODC will develop a project for the northern part of the KCS3 project, on which the abandoned Reed Mine is discharging AMD.

Through a Brownfield Assessment Grant, FODC obtained a remediation design for the Reed Mine project. FODC is now submitting a proposal to the Watershed Cooperative Agreement Program in the Office of Surface Mining to complete the funding for the Reed Mine project.

Pollutant loads

Load information for this and other project is contained in the accompanying spreadsheet: "FODC GRTS information Spring 2012.xlsx." No loads have yet been reduced by an FODC project.

Milestones

The project is behind schedule.

July 2, 2012	Pre-bid for project
July 16, 2012	Award project
July 30, 2012	Construction commences
September 30, 2012	Completion of construction, close-out of the grant

Expenditures

As of 3/31/2012, FODC spent $408 on labor for project development, and $945 on monitoring, education and planning related to nonpoint source pollution, and $425 for analysis of water quality samples for nonpoint AMD concentrations.

Map

See Figure 1.

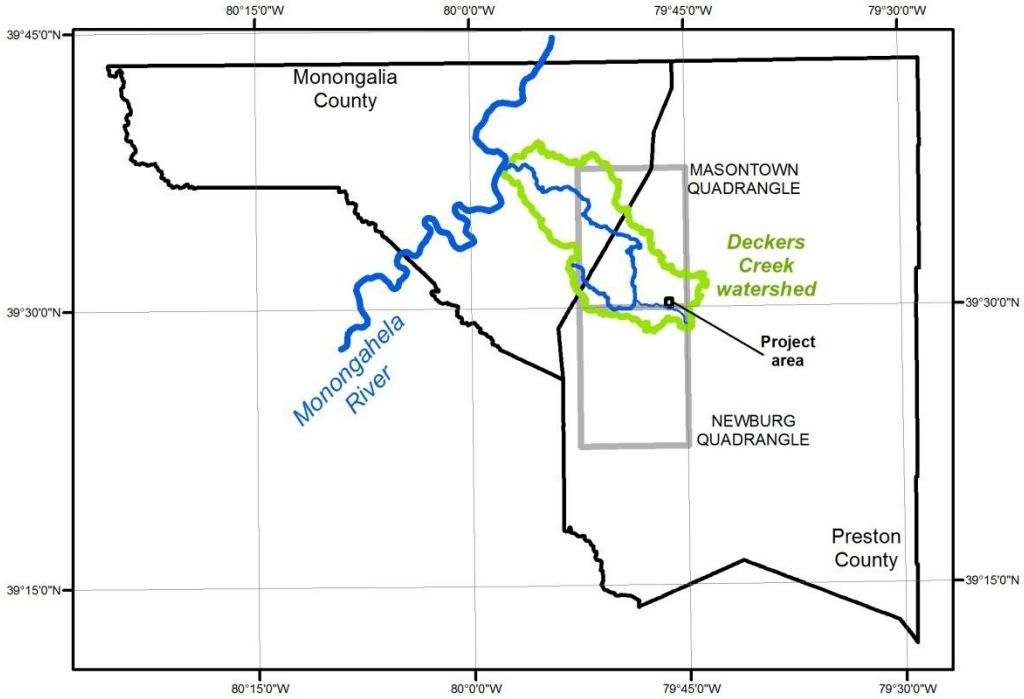


Figure 1: Location of KCS3 project.

Slabcamp Run Mainstem AMD Remediation

Name:		Slabcamp Run Mainstem AMD Remediation
Agreement Number:		1318
Fiscal year:		2010
Amount:	$	211,800
Spent as of 3/31/2011:	$	0
Reimbursed as of 3/31/2011:	$	0

Narrative

In June, 2009, Friends of Deckers Creek proposed to use FY 2010 nonpoint source funds to build a remediation project to address three AMD discharges to the mainstem of Slabcamp Run. Open limestone channels carry the AMD all the way from the discharges to the stream. The greatest challenge for this project will be installing AMD treatment in steep terrain. FODC will hire engineers earlier in the process to support decisions about feasible conceptual designs.

Loads have been quantified. Friends of Deckers Creek is developing a project through consultation with landowners and discussions with AMD experts.

FODC has contacted landowners in West Virginia and Virginia. Landowners support the elimination of these nonpoint pollution sources, but they have not yet reviewed any actual conceptual designs showing the footprint of the projects.

Pollutant Loads

The project will eliminate AMD loads discharging from portals that were sealed and refuse piles and impoundments that were reclaimed by OAMLR in 2004 (Table 1). AMD sources are named for monitoring points identified by OAMLR. One open limestone channel, OLC 650, drains two collapsed portals. OLC 750 receives AMD from two reclaimed impoundments and a reclaimed refuse pile.

Table 1: Loads to be eliminated through the Slabcamp Run Mainstem AMD Remediation Project

Discharge Area	-----Loads by chemical -----			Expected acidity reduction	Expected final load
	Aluminum	*Iron*	*Acidity*		
OLC 650	2,390	2,350	27,600		
OLC 750	3,400	2,830	37,000		
Total load	5,790	5,180	64,600	58,000	
Slabcamp mainstem load	*7,800*	*5,300*	*82,000*		*24,000*

Milestone schedule

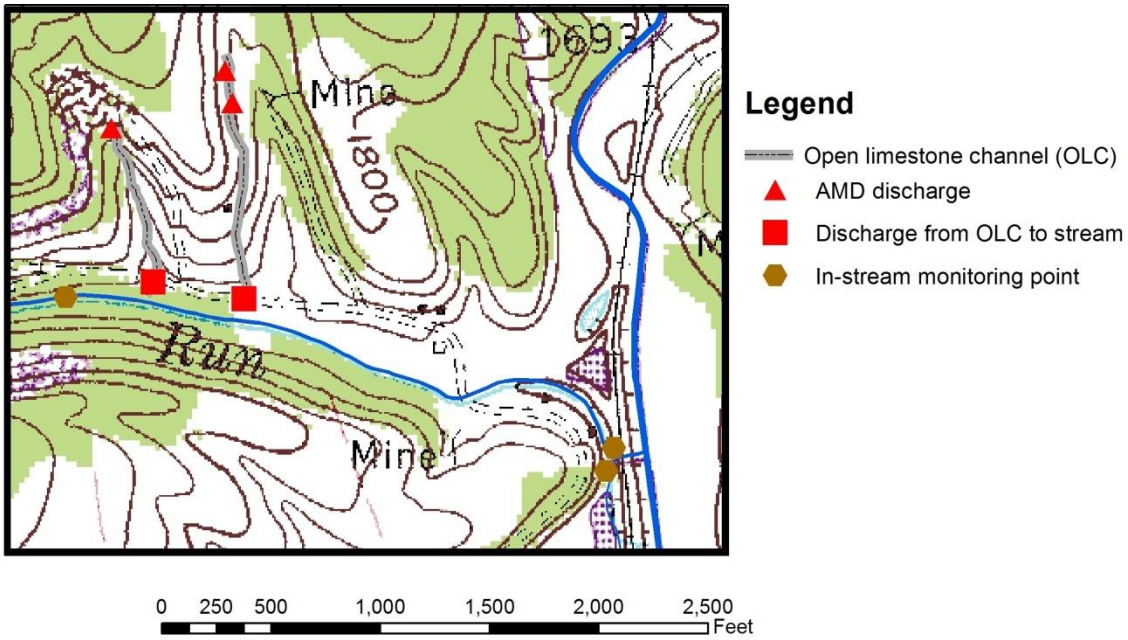
2011	
October-December	Initiate procurement process for engineers.
2012	
January-March	Select an engineering company and develop a contract for design work.
April-September	Engineer completes design for the project.
October-December	Project goes out to contractors for sealed bids. Construction begins.
2013	
January-June	Construction is completed.
July-September	Project close-out.

Expenditures

FODC has made no reimbursement requests so far.

Map

See Figure 2.



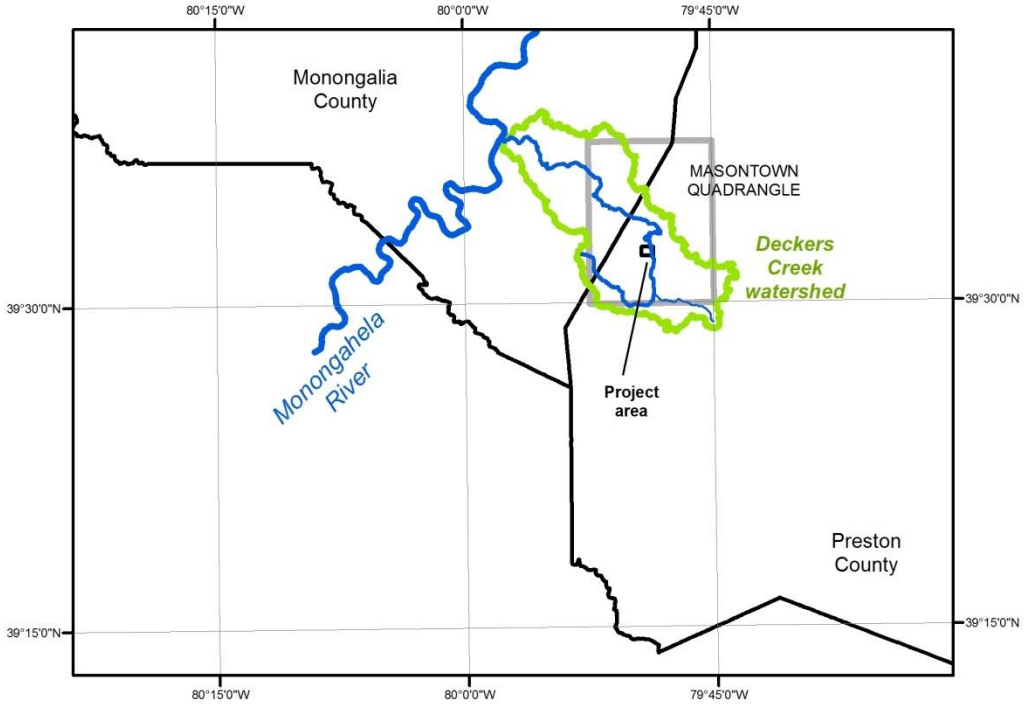


Figure 2: Slabcamp Run mainstem project area

Slabcamp Tributary AMD Remediation

Name:	Slabcamp Mainstem AMD Remediation
Agreement Number:	1381
Fiscal year:	2011
Amount:	$ 274,089
Spent as of 9/30/2011:	$ 0
Reimbursed as of 9/30/2011:	$ 0

Narrative

Slabcamp Run has one small tributary. Remediation of water quality in that tributary will improve the productivity and diversity of a 6-acre wetland that lies adjacent to a 700-foot stretch of the Deckers Creek Trail. That rail-trail is already popular for bird and wildlife watching, and will become even more valuable with a diverse wetland.

WVDEP OAMLR and FODC constructed projects on this site using FY 2003 319 funds. Those projects, however, are not supplying enough alkalinity to neutralize two well-characterized acid sources on this tributary. FODC will install additional acid neutralization projects at the two well-characterized sources. Additional monitoring during project development may quantify one additional source, in which case plans may be modified.

Pollutant Loads

Three AMD sources are well characterized. The headwaters of the tributary carry a small load of acidity, which is being neutralized by a limestone leach bad installed by FODC in 2007. An open limestone channel (OLC250) receives AMD from a pair of wet-sealed portals and discharges it to the tributary immediately downstream from the limestone leachbed. One more wet-sealed portal delivers AMD to the wetland (Table)

Pollutant	--- Loads by source ---		Total load	Expected reduction	Expected final load
	OLC250	*OLC300*			
Aluminum	3,900	1,400	5,300	4,800	500
Iron	500	600	1,100	1,000	100
Acidity	32,000	18,400	50,400	45,400	5,000

Milestone schedule

Tasks	2012				2013				2014			
Initiate procurement process for engineers.												
Select an engineering company and develop a contract for design work.												
Engineer completes design for the project.												
Seek necessary permits for the project.												
Project goes out to contractors for sealed bids.												
Construction of the pollution management measures and close-out of the project.												

Note: Post-project monitoring will occur in the latter half of 2014 and into 2015

AGO PROJECTS

AGO 2010

Name:	Monitoring Non-Point Source Pollution in the Deckers Creek Watershed
Agreement Number:	1334
Deadline:	9/30/2012
Amount:	$ 15,060
Spent as of 3/31/2011:	$ 12,358
Reimbursed as of 3/31/2011:	$ 12,119

Narrative

FODC proposed to conduct monitoring to test whether Deckers Creek and some of its watersheds are impaired by fecal coliform bacteria concentrations. FODC encountered a serious obstacle, namely that the laboratory to which it submitted its samples did not return trustworthy results.

Upon this discovery, FODC submitted samples to a more trustworthy (but more expensive) laboratory. FODC compiled the data it knew to be trustworthy as well as data that was supplied by the WVDEP and submitted the package for consideration in the 303(d) listing process.

FODC also proposed support for its Clean Creek program, and has continued quarterly sampling at the Clean Creek Program sites.

Milestones

May, 2012	Spring 2012 Clean Creek monitoring
August, 2012	Summer 2012 Clean Creek monitoring
September 30, 2012	Final close-out of the agreement.

AGO 2011

Name:	Assessing streams for impairment and planning stream bank protection in the Deckers Creek watershed
Agreement Number:	1367
Deadline:	6/30/2013
Amount:	$ 10,230
Spent as of 3/31/2011:	$ 1,573
Reimbursed as of 3/31/2011:	$ 743

Narrative

FODC proposed to monitor two streams to review their impairment status and to communicate with agencies and landowners to develop a stream bank protection project on Aarons Creek.

FODC has conducted five monitoring trips on the two streams. So far, data does not indicate these streams (which were impaired previously and received target load reductions in the TMDL) are not impaired, although certain tributaries to them are impaired. The project continues and additional monitoring data will be collected by the end of the project.

FODC and its partners have not been able to develop a stream bank protection project. Land owners who appeared willing at one point are no longer willing. FODC will discuss reprogramming this part of the project with WVDEP personnel.

Milestones

May, 2012	303(d) monitoring of Hartman Run and Beulah Hollow Discuss project revision with WVDEP
June, 2012	303(d) monitoring of Hartman Run and Beulah Hollow
July, 2012	303(d) monitoring of Hartman Run and Beulah Hollow
August, 2012	303(d) monitoring of Hartman Run and Beulah Hollow
September, 2012	303(d) monitoring of Hartman Run and Beulah Hollow
October, 2012	303(d) monitoring of Hartman Run and Beulah Hollow

AGO 2012

Name:	Preparing, monitoring, and improving AMD remediation projects
Agreement Number:	1405
Deadline:	9/30/2012
Amount:	$ 12,000
Spent as of 3/31/2011:	$ 1,092
Reimbursed as of 3/31/2011:	$ 0

Narrative

FODC proposed to monitor subwatersheds where it is conducts AMD remediation projects, to monitor the performance of those projects, to make minor adjustments to improve the performance of those projects, and to explore the Dillan Creek watershed to generate conceptual designs for AMD remediation there.

FODC has performed quarterly monitoring in the Kanes Creek watershed, has visited past projects for follow up, and has organized volunteers to make minor improvements at two of its past projects.

Milestones

May, 2012	Monitor Slabcamp Run Visit past projects for follow-up
June, 2012	Monitor Kanes Creek watershed Visit past projects for follow-up Complete reconnaissance of Dillan Creek
July, 2012	Monitor Slabcamp Run Visit past projects for follow-up
August, 2012	Visit past projects for follow-up
September, 2012	Monitor Kanes Creek, Slabcamp run Visit past projects for follow-up